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The Lessons of East Asian Development and Alternative Development Strategies for Hainan

K. C. Yeh

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The Lessons of East Asian Development and Alternative Development Strategies for Hainan

K. C. Yeh

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PREFACE

This is one of a series of four RAND Notes prepared for the National Research Center for Science and Technology for Development (NRCSTD) and the government of Hainan province, in accord with RAND's memorandum of agreement with NRCSTD and China's Ministry of Foreign Economic Relations and Trade. The other three are Charles Wolf, Jr., *Restructuring Hainan's International Trade and Finance: Currency, Foreign Exchange, and Trade*, N-3292-NRCSTD; Donald Putnam Henry, *Restructuring Hainan's Fiscal System, N-3293-NRCSTD;* and Charles Robert Roll, Jr., *Comparison of Hainan with the Other Special Economic Zones*, N-3295-NRCSTD.

The RAND work is intended to provide analytic assistance to NRCSTD and the Hainan government in planning the province's development along market-oriented lines.

SUMMARY

This study attempts to draw lessons from the development experiences of South Korea, Taiwan, and Hong Kong that may aid in the design of development strategies relevant to Hainan's policy decisions. We focus on long-range problems that these three economies and Hainan all face, the policy options open to them, the methods that have been used, and both the positive and negative results of their policy reforms.

We begin by comparing the development performances of the three newly industrialized economies (NIE) with the averages for the developing countries and industrial countries for the period 1950 through 1987. The record clearly shows that it is possible to trigger economic growth from rather low levels of per-capita income,and that relatively high growth rates can be generated and sustained.

The primary elements accounting for the success of South Korea, Taiwan, and Hong Kong were as follows:

(1) All three adopted development strategies that were outward oriented, market driven, export promoting and based on internal economic liberalization.

(2) Their export-led growth was based on export of labor-intensive manufactures, which required industrialization from the very beginning. But this does not mean that agriculture is unimportant. On the contrary, the experience of Taiwan indicates that industrialization and agricultural growth are not alternatives—both must grow in support of one another—and that industrialization could begin with the production of processed agricultural products and rapidly expand to labor-intensive consumer durables.

(3) All three NIEs had high rates of investment.

(4) The degree of government intervention varied among the three NIEs, but common to all was the relatively small size of the government and a policy focus on perfecting the infrastructure that permitted entrepreneurs to work efficiently and compete in the world market.

To provide a basis for policy guidelines, we examine more closely how the NIEs dealt with four specific issues: the strategy of industrialization, agricultural growth, financing development, and the role of the state. Industrialization must provide the basis for long-term growth, because structural transformation from a predominantly agricultural to an industrialized eonomy is necessary to raise productivity significantly for the economy as a whole. Two alternative paths to industrialization have been tried. The first is the inward-oriented policy that calls for government intervention to protect the growth of domestic

industries by setting up barriers to imports. The second is the outward-oriented policy that calls for incentive schemes to stimulate exports.

Virtually all developing countries, including Taiwan and Korea (but not Hong Kong), went through a phase of import substitution for consumer nondurables at their early stages. However, given the limited size of the domestic market, it soon became saturated, and the government had to decide whether to push ahead with import substitution of intermediate goods and capital goods, or to switch to outward-oriented policies. The Latin American countries and India took the former route. The NIEs adopted the latter. The NIEs fared much better in generating and sustaining growth, in economic efficiency, and in holding down the inflation rate.

Like Taiwan and Korea, Hainan has a legacy of import substitution policies. If the outward-oriented strategy is to be adopted, a set of incentive schemes to neutralize the negative effects of the established policies on export would be essential, such as an exchange rate that is not overvalued, tax rebates, retention of foreign exchange by the exporter, government-supported market research and information services, and export-processing zones.

Chances are that it is not too late for Hainan to follow the same route. The real wages in the NIEs are much higher than in Hainan, not to mention those in the industrial economies. Hainan thus has the comparative advantage in the production of labor-intensive products, which require relatively low levels of technology and scale economies and which generally are price-sensitive in the world market. In fact, as a late-comer, Hainan may even benefit from the movement of manufacturing from the NIEs to developing countries, by the opening of new markets as the NIEs' income levels continue to grow, and by increasing the involvement of the Soviet Union and Eastern Europe in world trade.

The experiences of Taiwan and Korea show that agricultural growth occurred simultaneously with industrial growth, although at somewhat slower rates. This should not be surprising. At the initial stages of development, agriculture, being the largest sector, must provide the resources to finance development, raw materials for industries, and labor for nonagricultural employment. As the economy develops, the rising income of the agricultural population could provide a market for industrial products. At the same time, the agricultural sector must supply sufficient food and other wage goods to the nonagricultural sector so as to keep real wages low; otherwise, the economy will lose its competitive edge.

Taiwan was able to increase agricultural output, first by increasing the sown acreage and capital investments and subsequently by raising productivity. A preliminary examination of Hainan's situation suggests that there may well be slacks in the agricultural

sector, so that increasing output with management and incentive reforms may be possible. In the long run, however, raising productivity will be the key, and the effective way to motivate the farmers is to increase their profits, not by price increases but by reducing costs through technological changes. In this respect, the Taiwan government invested heavily in infrastructure in support of agriculture, such as irrigation, input supply systems and marketing channels, and, more importantly, in agricultural research and extension services.

The other major element in Taiwan's agricultural success has been the farmers' flexible response to market conditions abroad. The farmers were able to diversify rapidly in exportable products that hitherto were not typical products of Taiwan, such as mushrooms, asparagus, and fruits. The lesson is that, given the government support of infrastructural investment and technical assistance, farmers can sort out the most profitable products in the world market, if the price signals are not distorted.

For Hainan, the problem of food supply could become much more serious in the future, because of the rapid development of industry and services in the urban areas and the potential increase in population resulting from natural increase in Hainan, migration from the mainland, and an expanding tourist trade. It may be worthwhile to look more closely into the prospective demand and the cost-effectiveness of alternative sources of supply: home production (as in Taiwan), imports from the mainland (as in Hainan today), or imports from abroad (as in Hong Kong).

Foreign aid was substantial in Taiwan and Korea in the 1950s and early 1960s. But its significance should not be overrated, because in both cases, a rather large proportion went to the defense sector in these two economies. Domestic savings were the primary source of capital in Taiwan from the very beginning. Even in the case of Korea, domestic savings, which accounted for one-third of the total in the mid-1950s, rapidly increased to one-half by the mid-1960s.

Among the sources of domestic savings, the private sector (households and private business) was the primary source in Taiwan. Among the various factors that stimulated private savings in Taiwan, two were particularly noteworthy: relatively high real interest rates and the development of small private businesses. The government did promote savings by keeping the nominal interest rate artificially low, keeping inflation in check, and providing facilities for private savings in the banking system and the postal system.

The focus on domestic savings is not to say that foreign capital inflow or government savings are any less important. Indeed, the tax reform in Taiwan in the early 1970s was intended primarily to increase government savings. The development of the Kaohsiung

Export Processing Zone was designed to attract foreign investment. Hainan's current plan for Yangpu appears to be a step in the right direction.

Each government had a vital role to play in the development of the NIEs, but the role of catalyst, not controller. These governments contributed significantly to their economic growth in four specific areas: creating and maintaining a modern infrastructure, both in a "hard" and "soft" sense; institutionalizing a stable incentive system for the entrepreneurs to operate efficiently; maintaining economic stability; and assisting the economy to adjust to changing world market conditions. For Hainan, this means substantial efforts are necessary in developing the soft infrastructure, developing policies to neutralize the disincentives caused by trade restrictions and overvalued exchange rates, maintaining tight control of fiscal and monetary policies, and making necessary investments in research and development. In sum, a small government does not mean limited functions of the state. On the contrary, an enormous and formidable task lies ahead for the government, but it must redefine the orientation of that effort.

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I. RELEVANCE OF THE EAST ASIAN DEVELOPMENT EXPERIENCE

Hainan's development goal is to generate and sustain a relatively high growth rate so that, at some target date, say the year 2000, per-capita income will reach a level substantially higher than the current one. The important question is how to attain this goal. What policy options are open to Hainan, and which course of action should Hainan take? This study addresses these issues by drawing on the experiences of three newly industrialized economies (NIEs) that have successfully gone through the same development process: South Korea (for convenience, henceforth Korea), Taiwan, and Hong Kong.

The comparative approach presupposes that Hainan and the NIEs are comparable cases of development. To substantiate this proposition, Table 1 compares Hainan in the 1980s with the selected NIEs in the 1950s. The comparison shows notable similarities and differences between the countries with respect to their development goals, the fundamental problems confronting them prior to economic takeoff, and the external environments that conditioned the course of their development. Where the issue of comparability is concerned, three important points deserve note.

PARALLEL GOALS AND PROBLEMS

There are strong parallels in the development goals and the nature of the problems confronting all these economies. Hainan's long-term goal, sustained economic growth with equity and efficiency, is no different from those of the NIEs. Nor are most of the initial conditions from which the economy evolves, including a low per-capita income relative to the industrialized economies, a rather unbalanced economic structure favoring the agricultural sector, and a lopsided supply of productive factors characterized by an abundant supply of labor and a limited supply of capital. These features in turn create some common problems, such as a small domestic market, low savings rate, low productivity, high degree of commodity concentration in exports, and underemployment of labor.

Other important similarities also broaden the scope of comparability. For example, as in the NIEs, Hainan has a strong government that effectively maintains political and social stability. In a sense, Hainan is a former colony; so were all three NIEs. The traditional attitudes of the people normally associated with the oriental culture are present, including a high value assigned to education, loyalty to family, respect for law and order, thriftiness, a work ethic, and entrepreneurial spirit.

Table 1

Comparison of Hainan (1980s) and Selected NIEs (1950s)

	Hainan	Korea	Taiwan	Hong Kong
Development goal				
Sustained growth	Yes	Yes	Yes	Yes
Initial conditions				
Natural resources	Some	—	—	—
Population density	Moderate	Moderate	Moderate	High
Per-capita income	Low	Low	Low	Low
Agricultural sector	Dominant	Dominant	Dominant	—
Principal export	Ferrous alloys	Rice	Sugar	Entrepôt
Physical capital	Limited	Limited	Limited	Limited
Human capital	Scarce	Scarce	Scarce	Scarce
Labor supply	Plentiful	Plentiful	Plentiful	Plentiful
Education of labor force	Poor	Poor	Poor	Poor
Technological level	Low	Low	Low	Low
Savings rate	Low	Low	Low	Low
Defense burden	—	large	large	—
Value system	Similar	Similar	Similar	Similar
Economic system	Planned	Market	Market	Market
Efficient government	Yes	Yes	Yes	Yes
Legal institutions	Weak	Weak	Weak	Strong
External environment				
Protectionism abroad	Strong	Weak	Weak	Weak
Regional trade blocs	Yes	—	—	—
Competition in world markets	Intense	Little	Little	Little
Foreign aid	—	Substantial	Substantial	—

NOTE: A dash means none or negligible.

DIFFERENCES IN CONDITIONS

The comparison in Table 1 also reveals important differences in some internal and external conditions. One set of differences relates to the natural conditions. Hainan has roughly the same land mass as Taiwan, but is smaller than Korea and larger than Hong Kong. Hainan lies closer to the equator than the NIEs. Its climate thus favors the cultivation of tropical and subtropical crops not easily grown in Korea or Taiwan. In natural resources, Hainan has discovered more energy resources than the NIEs and is endowed with mineral resources, such as titanium and iron ore. By and large, Hainan's natural environment is better than that of the NIEs, but clearly not enough to provide Hainan the option of a resource-based development strategy.

The second set of differences relates to factor supply, and here Hainan's situation is less favorable. The stock of infrastructural capital in Hainan is probably smaller than in Taiwan; the educational level of the labor force is probably lower; and there has been no infusion of entrepreneurial skills, as was the case of the NIEs. Undoubtedly, these handicaps would make the economic takeoff in Hainan more difficult. Nonetheless, these

differences are matters of degree and not serious enough to be decisive. In any case, the conditions are readily changeable through deliberate policies. For example, the power shortage in Haikou virtually disappeared overnight as a result of high-priority development in energy supply. Despite acute shortages, it did not take Korea very long to develop a managerial class after the liberation from Japanese occupation during World War II.[1] For Hainan, the supply of semiskilled labor can be increased through training or augmented by inflow from the mainland.[2]

The third set of differences reflects the major changes in the international environment in the 1950s and the 1980s. These changes include the rising protectionism in the developed countries and the trend toward managed trade, the emergence of regional trading blocs (the Integrated European Market and the North American Free Trade Zone), increasing competition in world markets from other developing economies, and the declining significance of U.S. development assistance to the Asian-Pacific economies.

The shift toward managed trade and the development of trade blocs may well restrict the growth of the markets in developed economies. The effect on Hainan may be less serious than now appears, because Hainan may be able to expand its market share as rising labor costs force the NIEs to move away from products in which Hainan has the comparative advantage.

No doubt other developing countries like Thailand and Malaysia, as well as other Special Economic Zones (SEZs) in China, will also try to expand their market shares. The keen competition will make life more difficult for Hainan than for the NIEs in the 1950s. However, the 1980s also witnessed the opening of new markets in Japan, the NIEs themselves, and the socialist economies. The upward trend is likely to continue as the NIEs' economic growth remains fairly strong, as Japan gradually liberalizes its trade practices, and as efforts by Japan and other Asian economies gather momentum in their attempt to promote closer regional cooperation in Asia to counter the trend toward regionalism in Europe and in North and South America.[3] At this point, exports from the developing Asian countries to the Soviet Union and Eastern Europe are limited by the latter's shortage of hard currency. However, complementarities in Hainan's and their exports indicate a potential for trade expansion.

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[1]Frank et al., 1975, p. 226.

[2]According to *China Daily*, the existence of a labor market in Hainan has attracted tens of thousands of professionals and skilled workers (January 4, 1991, p. 4).

[3]For example, Japan is drawing up a comprehensive plan for Asian industrialization to foster the export of Asian countries (*Mainichi Daily News*, Tokyo, January 6, 1991, p. 1).

Perhaps the most commonly cited argument against comparing Hainan with the NIEs is that both Taiwan and Korea received large doses of development assistance from the United States and that Hainan is unlikely to receive foreign aid on a comparable scale. It is certainly true that the United States no longer provides massive aid to Asian-Pacific economies. For Hainan, this particular change has little significance, for two reasons. First, there are new sources of development assistance. Japan has emerged as the most important aid donor, particularly to Asian-Pacific economies. In addition, the lending capacities of international financial institutions, such as the Asian Development Bank and the World Bank, have greatly expanded since the 1950s. Second, important as U.S. aid to Taiwan and Korea may be, its significance should not be exaggerated. In both Taiwan and Korea, the defense burdens were rather large. For an economy that has little or no defense burden, the supply of savings would be larger and the need for foreign aid somewhat less compelling than otherwise. Compared to Taiwan and Korea, Hong Kong received no foreign aid at all. Yet its development performance was just as impressive as Taiwan's or Korea's.

The key is to mobilize sufficient capital for development, and there are other sources of capital besides foreign aid. For Hainan, the opportunity lies in foreign private capital. In recent years, private investment in the developing Asian-Pacific economies, particularly by multinational corporations, has been rising rapidly. Private capital comes not only from the United States and Japan, but also from the NIEs, such as Taiwan and Korea, primarily to move their manufacturing facilities to countries with lower comparative costs. Thus, the lack of U.S. aid does not preclude the possibility of Hainan acquiring foreign capital from other public or private, bilateral or multilateral sources.

PLANNED VERSUS MARKET ECONOMIES

There is another set of important differences between Hainan and the NIEs. Hainan is essentially a planned economy, and the NIEs are basically market economies. The institutional frameworks in support of the two systems and the development strategies designed to operate within the systems are fundamentally different. These differences are of paramount importance, because it is the system and the development strategy of the NIEs that largely accounted for their success, and because, unlike natural resource endowments, institutional changes and policy reforms are transferable.[4]

[4]A large body of literature explains the NIEs' success in these terms. See the Bibliography.

CONCLUSIONS

Comparability between Hainan and the NIEs (and, hence, the relevance of the NIEs' experience) is really not a substantive issue. The nature of the problems confronting them is basically the same, and the differences in the internal and external environments that do exist (with the exception of the economic institutions) are immaterial (as in natural resource endowments), readily amendable (as in the limited capital stock), or significant but to a large extent offset by new opportunities (as in export markets and trends in the multinationals' offshore manufacturing). The difference that really matters lies in the institutional framework that makes the development policies possible. It is precisely the institutional and policy elements in the NIEs' development process that this study will focus on.

Section II examines the salient features of the NIEs' development strategies to provide an overview of the elements that largely accounted for their economic success. The succeeding four sections identify the policy instruments used to implement their strategies in four specific areas: industrialization and trade, agricultural growth, financing development, and the role of the government. In each area, we sort out the issues, policy options and measures, results, and implications for Hainan.

II. NIE DEVELOPMENT STRATEGIES: AN OVERVIEW

The impressive record of the three NIEs is well known. Their average annual GNP and per-capita GNP growth rates since 1950 (Table 2) show that all three economies have clearly outperformed the averages for developing and industrial countries. Several features of their growth records are of particular interest to Hainan. First, the level of per-capita GNP in Hainan today is probably below those of the NIEs in 1950. But then, the NIEs were below those of the industrial countries in their pre-industrialization phase.[1] The gap had not been an insurmountable obstacle for the NIEs. As Table 2 shows, Taiwan's per-capita GNP was less than one-tenth of the average for the industrial countries. By 1980, the gap narrowed to about one-fifth. This suggests that, despite serious initial handicaps, it is still possible to transform a low-income economy to a semi-industrialized one.

Second, the rates of GNP growth of the three NIEs were much higher than those of the industrial countries, such as the United Kingdom, Germany, the United States, and Japan, during the first three decades of the NIEs' industrialization.[2] In fact, the growth rates in all three economies for the period 1950–1987 as a whole exceed 7.2 percent per year, the growth rate required to quadruple GNP in two decades.

Third, Taiwan and Korea began to grow rapidly in the mid-1960s. The upturn coincided with an expanding global economy and trade and, perhaps more importantly, with major policy reforms in these two economies. Their GNP growth has slowed somewhat since 1980 because of the oil shocks, the economic slowdown in the industrial countries, and the rise of protectionism, but their growth rates remained high. In particular, their per-capita GNP growth rates exceeded those of the three country groups in Table 2 by a wide margin in the 1970s and 1980s, indicating that the NIEs have become resilient and flexible enough to sustain their economic growth.

To sum up, the development record of the NIEs suggests that it is possible to trigger economic growth even at an initially low level of per-capita income, that rather high growth rates can be generated, and that such high rates are sustainable. The crucial question for Hainan is: What does it take to achieve such a performance? Providing some clues to this question, the following salient features are common to all three NIEs during their development:

[1]For comparison of development levels between the NIEs and the industrial countries, see Kuznets (1965), pp. 177–178.

[2]Kuznets (1971), pp. 11–14.

(1) The first and foremost characteristic of NIE development is that their economic growth has primarily been led by exports. A stylized model of their development would higlight their policies as outward oriented, market driven, export promoting, and based on internal economic liberalization. This is in sharp contrast to the development strategies of many Latin American countries, which are characterized as inward-oriented, interventionist, and import substituting.

(2) Export-led growth was based on exports of manufactures, even though both Korea and Taiwan were at first predominantly agricultural. This implies that industrialization has been a key component of export-led growth. All three NIEs started with the manufacture of labor-intensive products for export, such as clothing, textiles, shoes, toys, and consumer electronics.

Table 2

Average Annual GNP and GNP Per-Capita Growth: 1950–1987

	GNP Growth (% per year)			Per-Capita GNP Growth (% per year)			Per-Capita GNP (1980 U.S. $)		
	1950–65[a]	1965–80[b]	1980–87[c]	1950–65[d]	1965–80[e]	1980–87[f]	1950[g]	1980[h]	1987[i]
South Korea	5.5	9.5	8.6	3.3	7.4	8.2	330	1,580	2,750
Taiwan	8.0	9.9	7.6	4.9	7.5	6.1	400	2,350	3,560
Hong Kong	10.2	8.5	5.8	5.5	6.4	6.2	910	5,470	8,320
Low-income developing countries	4.0	4.8	7.2	2.0	2.7	4.6	130	270	370
Middle-income developing countries	5.0	6.5	2.7	2.4	3.9	0.2	620	1,580	1,600
Industrial countries	4.6	3.7	2.6	3.4	3.0	2.2	4,180	10,750	12,490

SOURCES:

[a]World Bank, 1980, pp. 100, 120, and 190 for Korea, Taiwan, and Hong Kong (GNP in constant prices); World Bank, 1987, p. xi for all others (estimates).

[b]World Bank, 1987, pp. 336–337; Council for Economic Planning and Development, 1989, p. 336.

[c]Council for Economic Planning and Development, 1989, pp. 336–337; World Bank, 1989, p. 337.

[d]Riedel, 1988, p. 5.

[e]For Korea, Taiwan, and Hong Kong, the difference between the GNP growth rates in Column 2 and population rates derived from World Bank, 1989, pp. 305 and 353, and Council for Economic Planning and Development, 1989, p. 4; for all others, based on World Bank, 1987, p. 26.

[f]For Taiwan, based on the GNP growth rate (7.6 percent, from Column 3) and the population growth rate (1.49 percent, Council for Economic Planning and Development, 1989, p. 4); for all others, based on totals in Columns 8 and 9.

[g]Derived from data in Columns 4, 5, and 8.

[h]For Taiwan, based on GNP in current prices (1,491.059 billion NT, Council for Economic Planning and Development, 1989, p. 23); for all others, World Bank, 1989, pp. 19, 21.

[i]For Taiwan, based on the 1980 total ($2,350, from Column 8) and the 1980–1987 average growth rate (6.1 percent, from Column 6); for all others, World Bank, 1989, pp. 19, 21. Note that these estimates are based on exchange rate conversion and are different from conversion based on purchasing power parities

(3) All three NIEs had high rates of investment. The proportion of gross domestic investment to gross domestic product averaged 11, 18, and 9 percent for Korea, Taiwan, and Hong Kong, respectively, in 1950–1960. This is not particularly high for developing countries, but the figures rapidly increased to 23, 23, and 21 percent, respectively, in 1960–1970 and remained above these levels in the 1970s and 1980s.[3]

(4) The degree of government intervention in the development process varied among the three NIEs. However, common to all three was the distinctive feature that their governments were relatively small and limited in function relative to those of other developing countries or socialist countries. The market systems in these economies were by no means perfect, but prices (including wages, interest rates, and foreign exchange rates) were usually not distorted, and prices have played a major role in directing and coordinating economic activities.

One particular task, which all three governments have actively promoted, is large-scale investment in human capital. As will be discussed below, the really crucial factor that made the high growth rates sustainable was the capability to continuously adjust the output and export structures to exploit changing comparative advantages in the world economy. Thus, one witnesses the shift of emphasis in their exports from land-intensive to unskilled labor-intensive products, and further to skilled labor-intensive and technology-intensive products. In this process, the entrepreneurs must be given the principal credit, but government support of education, technical training, and innovation has also contributed substantially to the structural transformation.

The brief discussion above outlines the basic ingredients of the NIEs' development strategies. To provide policy guidelines for Hainan, it is necessary to examine further why the strategy worked, how the NIEs dealt with specific issues, what policy instruments have been effectively used, and what concrete lessons may be useful to Hainan. We shall focus on four issues: industrialization and trade policy, agricultural growth, financing capital formation, and the role of the government. Clearly, these four issues are closely related to the ones under separate study. For example, institutional reforms to decontrol prices, eliminate export quotas, and ensure currency convertibility are some of the basic conditions for the export-promotion strategy. Likewise, the high investment rate required to implement the industrialization strategy raises the question of how to supplement domestic savings with foreign capital. The comparison of the four SEZs complements our study of the NIEs'

[3]World Bank, 1980, pp. 101, 121, 191; World Bank, 1989, pp. 62–63; Council for Economic Planning and Development, 1989, p. 43. These ratios are based on totals in current prices.

experience with foreign investment and borrowing. Also, the discussion of what the government can and should do to promote growth is not very meaningful unless the government can mobilize sufficient resources through fiscal restructuring to implement its policies.

III. STRATEGY FOR INDUSTRIALIZATION

The experience of the NIEs clearly indicates that economies that pursued export growth grew faster.[1] But export growth is essentially growth of manufactured exports. Therefore, an economy following this path of development must develop a certain industrial base and a set of technical skills before it can pursue manufactured exports. More generally, regardless of whether a country adopts the export growth policy or not, empirical evidence suggests that output per capita is positively associated with the share of industrial output (mining and quarrying, manufacturing, construction, electricity, gas, water, and transport and communication) in gross domestic product.[2] Industrialization therefore must provide the basis for long-term economic growth. The question is how to industrialize. In the post-World War II period, two alternative strategies were adopted: an inward-oriented strategy designed to promote industrialization through import substitution and an outward-oriented strategy that promotes industrialization through export promotion.

The inward-oriented strategy involves deliberate intervention with the market to substitute domestic manufactures for imports and thus promote the growth of domestic industries. The rationale is that, given an initial demand for consumer goods, the economy can develop an indigenous industry (often with imported parts) to replace imports and subsequently industrialize through the production of intermediate goods and capital goods. Many Latin American countries, including Brazil, Mexico, and Argentina, adopted this approach.

The export-promotion strategy entails a set of government policies to ensure the working of the market mechanism, including measures that do not tilt incentives against exports. The NIEs have adopted this approach. It should be noted that, with the exception of Hong Kong, both Korea and Taiwan went through an initial phase of import substitution involving the replacement by domestic production of imports of nondurable consumer goods, such as textiles, shoes, and furniture and wood. These were, however, brief episodes in a protracted process of growth guided by the export-promotion policy.

A study by the World Bank using 1963–1985 data for 41 developing economies shows that the economic performance of the outward-oriented economies has been broadly superior to that of the inward-oriented economies, in average annual growth rates of real GDP and

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[1]World Bank, 1987, p. 26. See also Balassa, 1978; Stern, 1989, p. 670; and Chenery in Meier, 1989, pp. 288–293.

[2]Kuznets, 1971, pp. 103–117.

per-capita income, in the gross domestic savings ratio, in the average incremental capital-output ratio, in the average annual growth rates of real manufactured exports, and in the group median of average annual rates of inflation.[3]

The relationship between trade strategy and economic performance cannot be precisely defined. However, several plausible hypotheses can be suggested to explain the contrasts in performance under the two alternative regimes:

1. The outward-oriented strategy not only allows a country to exploit its existing comparative advantages, but also encourages new investments to flow into industries that correspond to the changing comparative advantages, thus making it possible for the economy to continuously benefit from international specialization.
2. As in present-day Hainan, all three NIEs had limited domestic markets in the early phases of development. Exports made it possible to overcome the limitations of the small domestic market in exploiting economies of scale through horizontal specialization (e.g., specializing in a smaller number of machine tools with higher quality) or vertical specialization (e.g., specializing in the manufacturing of parts, components, and accessories, such as Taiwan's supply of stereo equipment for GM cars).
3. Competition in the world market induces technological change in export industries, which is necessary for these industries to maintain and improve their market position.
4. Closely related to the first point is the potential for the outward-oriented economy to attract foreign investment, particularly by multinationals that plan to shift some of their operations to developing countries to take advantage of lower wages.

By contrast, the import-substitution policy requires import restrictions to protect domestic industries, and protection almost certainly causes inefficiencies for the following reasons: First, protective measures generally result in an overvalued foreign exchange rate, which in turn discourages exports. By denying domestic producers access to world markets on undistorted terms, protection may limit the producers' potential to the narrow domestic market, thus sacrificing economies of scale. Second, to encourage the development of import-

[3]World Bank, 1987, pp. 78–88.

substituting industries, subsidies in the form of low interest costs are often used. The result is that relatively capital-intensive investments are made, putting the developing country at a disadvantage. Third, under protection some domestic producers may become monopolists who exploit the market by restricting output to charge more and have no incentive to lower costs, improve quality, or innovate. Fourth, protection creates opportunities for businessmen and bureaucrats to seek illegal profits.

In light of the experience of the NIEs, in sharp contrast to the poor performance of some Latin American countries, the policy choice for Hainan seems clear. Two important questions remain: What specific policy measures have Korea, Taiwan, and Hong Kong adopted that made the outward-oriented strategy work and will the same policies work for Hainan, given its internal conditions and current external environment?

The NIEs adopted two different approaches to implementing the outward-oriented strategy and, accordingly, two different sets of policy measures: a neutral government trade policy by Hong Kong, and a positive policy by Korea and Taiwan. Hong Kong had from the very beginning an open economy characterized by its free-port status, absence of exchange controls, low taxes, and the availability of an extensive range of financial services. There had never been any deliberate government policy to promote exports. Its adoption of an outward-oriented strategy was unplanned. Several circumstances had forced Hong Kong to go the outward-oriented route. Beginning in 1950, Hong Kong's importance as an entrepôt had sharply diminished as a consequence of the reorientation of China's trade toward the Soviet Union and Eastern European countries, and because the Western embargo further limited China's trade with the West through Hong Kong. There was an urgent need to seek a way out. This same period (late 1940s and early 1950s) witnessed massive inflows of labor, capital, and entrepreneurs from China. At the same time, Hong Kong had an excellent economic and social infrastructure for economic development and trade. The many financial institutions and trading companies that used to be involved in reexport business were now in a position to provide their financial and marketing expertise to export Hong Kong's own manufactures. Thus, the conditions in the 1950s were ripe for Hong Kong to develop many small factories producing labor-intensive products for exports to industrial countries. In the following decades, Hong Kong was able to continue to expand exports partly because of the responsiveness and adaptability of the private entrepreneurs to changing market conditions and partly because wage increases had been moderate as a result of a steady stream of new immigrants, increase in the participation of women, and the post-World War II baby boom coming into the labor market.

The conditions in Hainan today are different from those of Hong Kong in many ways. Hainan has not had a massive inflow of capital and entrepreneurs. Hainan does not yet have the infrastructure, financial, and marketing facilities. More important, Hainan has a complicated system of import and export licensing, tariffs, and administered prices that Hong Kong did not have. For these reasons, Hong Kong's experience of a neutral government trade policy may not be as relevant to Hainan as those of Korea and Taiwan.

Unlike Hong Kong, both Korea and Taiwan went through an initial import substitution phase. As a result, many import barriers had been erected that tended to discourage exports. They undertook the outward-oriented route by adopting various policies to offset the bias against exports. Since China also inherited a set of inward-oriented policies from pre-1978, it may be useful to note the protectionist measures that Korea and Taiwan had and the subsequent policies used to remove the bias. Commercial policy, financial and fiscal policy, and exchange rate policy all have been instruments of Korea's and Taiwan's inward-oriented strategy. They included direct controls, such as import quotas and import licensing; tariffs, both open and hidden (stamp tax, post tax, etc.); subsidies, such as production subsidies, wage subsidies, credit subsidies, and tax holidays; and multiple exchange rates, overvalued exchange rates, and discriminatory allocation of foreign exchange. The use of these policy instruments proved quite successful in developing infant industries producing nondurable consumer goods. This was because the manufacture of these products conformed to the production possibilities of the two economies. These industries utilized largely unskilled labor, which both Korea and Taiwan had in abundance; did not require sophisticated production technology, which both lacked; and were not subject to scale economies, so that even the small and slow-growing markets in these economies could support their growth.

By the late 1950s and early 1960s, the domestic market for these products had been saturated, and the rate of growth of industrial output could no longer be sustained, since it exceeded that of demand. The NIEs now had two choices: export nondurable consumer goods to continue industrial growth or move to a second stage of import substitution, which would require the replacement of imports of producer and consumer durables and intermediate products, such as steel and chemicals. Both Korea and Taiwan decided on the first option. This was a rational choice, because the second option would have been very costly for two reasons. First, the domestic market at this stage was not large enough for the economical production of intermediate goods or to permit specialization in the production of parts and accessories for the manufacture of producer and consumer durables. Second, the

production of producer and consumer durables requires more skilled and technical labor, and the intermediate goods are generally highly capital-intensive.

The shift from an inward-oriented to outward-oriented strategy was by no means easy. The systems of controls, tariffs, and subsidies introduced in the early 1950s in support of the inward-oriented strategy had become so deeply entrenched in the economy that they could not be dismantled overnight. Yet they were incompatible with the requirements of an outward-oriented strategy. What Korea and Taiwan did was to liberalize the import controls slowly and, at the same time, actively promote exports by introducing incentive schemes that increased the profitability of exports. The latter included replacing the multiple exchange rate system with a single exchange rate and adjusting downward the overvalued exchange rates, tax rebates of import duties on imported raw materials used in the production of export products, substantial reduction of tariffs for imports of capital goods used in production for export, access by export industries to loans at below-market rates, foreign exchange retention schemes, and government-sponsored market research and information services.

For example, Table 3 clearly shows the successive devaluation of the two currencies between 1950 and 1970, until the exchange rates reached more realistic levels.

Hainan can surely benefit from the specific policy measures noted above if it decides to adopt the outward-oriented strategy. Among the many possible lessons from the NIEs' experience, perhaps the most fundamental are that outward orientation links the domestic economy to the world economy mainly through export expansion; that, where trade barriers exist, incentive schemes are essential to promote exports; and that such schemes are, in effect, reforms to permit the price system to work better. This clearly has important policy implications for Hainan. For example, a convertible currency would have the distinct advantage of an undistorted foreign exchange rate, which is crucial to any outward-oriented

Table 3

Currency Devaluation, 1950–1970

	Korea (Korean Won/U.S. $)	Taiwan (New Taiwan $/U.S. $)
1950	2.500	10.287
1955	50.000	32.240
1960	63.750	39.726
1965	266.170	40.000
1970	270.250	40.000

SOURCE: World Bank, 1980, pp. 120, 190.

regime.[4] If prices in Hainan are distorted by the tariff system or other trade barriers, it is imperative that other policy measures be adopted to offset the price distortions, as in the case of Korea and Taiwan. A more rational, if drastic, solution is to eliminate the distortions altogether, as in the case of Hong Kong.

Even if the distinct advantages of an outward-oriented strategy are clear, one needs to consider the changing external environment. The NIEs began their rapid growth in the 1960s when the global economy and trade were expanding faster than in any other periods. The question thus arises as to whether the outward-oriented strategy will work in the 1990s when the industrial economies will probably grow at a slower rate than before,[5] when protectionist sentiments are rising, when regional trade blocs are emerging, and when new NIEs, such as Thailand and Malaysia, are competing aggressively for their shares in the world market.

There are reasons to believe that the future may not be as bleak as it appears. First, the NIEs began with exports of manufactures of labor-intensive, nondurable consumer goods (e.g., textiles and clothing, leather goods) to industrial countries. The demand for these goods was rather price sensitive. To the extent Hainan or any new NIEs can effectively exploit their comparative advantage in relatively low labor costs, they should be able to replace the NIEs as exporters of labor-intensive products, just as the NIEs have replaced Japan as the major exporter of partially skill-intensive products (consumer electronics, communications equipment, etc.).

Second, protectionism is largely a political issue, and it generally rises in countries facing large and persistent trade deficits. But large volumes of exports from Hainan and developing countries do not necessarily lead to large deficits in the industrial countries. As incomes rise in Hainan and other new NIEs, they will import more, some or even a large share of which will be to the industrial countries, as evidenced by the sharp rise of the NIEs' imports in recent years.

Third, empirical evidence does not support the hypothesis that slower growth in the industrial countries will lead to a slowdown in the growth of exports from the developing countries. The growth of such exports was as high in the 1970s as in the 1960s, even though the industrial economies grew about half as fast on average.[6] One possible explanation is that trade among the NIEs had also expanded. There is no reason why the NIEs cannot

[4]See discussion in Wolf, 1991.

[5]For projections of GNP growth of the major industrial economies to the year 2010, see Wolf et al., 1989.

[6]World Bank, 1987, p. 26.

engage in trade on a scale with low-income developing areas like Hainan in the future just as the industrial countries are trading with them today. The developing countries are different enough in their demand and cost structures for there to be opportunities to exploit comparative advantages among them. The movements of offshore manufacturing from Taiwan and Hong Kong to China's SEZs and Thailand indicate that such a process has already begun.

In addition, as noted earlier, the opening up of new markets in the Soviet Union and Eastern European countries, albeit still in the making, is a new development in the 1990s that could become important to the NIEs and Hainan because of certain complementarities between the two groups. The NIEs and Hainan can exchange textiles, electrical appliances, and other consumer goods, as well as primary products, such as spices and other subtropical products, for Soviet technology, medical equipment, and composite materials. For all these reasons, there seems to be little ground for rejecting the outward-oriented strategy because of a less favorable global economic environment than before.

In light of NIE experience, what policies should be adopted to promote exports and what industries should be developed? The lessons of the NIEs clearly suggest that the government can and should do much to promote exports. For example, it can maintain a more or less equilibrium exchange rate, or better still, a freely convertible currency; liberalize trade; eliminate subsidies; provide training programs to develop skilled labor, managers, and international marketing expertise; fund R&D programs to assist product or process imitation and innovation; and sponsor a special organization to assemble and disseminate information on world economic and market conditions.

As for what specific industries are to be developed, the decision is best left to the entrepreneurs, who can better judge which products have the comparative advantage at a given time and therefore have a good chance to compete successfully in domestic and international markets. A cursory examination of the changing export structures of the NIEs indicates that, at the initial stage, their exports were largely land-intensive products, such as sugar and rice. It may well be that Hainan at the initial stage also has some advantage in exporting similar primary products, such as sugar, rubber, spices, vegetables, iron ore, and titanium ore. But for the NIEs, these were only the initial stepping stones to industrialization and were soon replaced by labor-intensive products, such as mushrooms, asparagus, eels, and edible snails. The shift quickly spread to manufactured products of a similar nature, such as textiles, clothing, plywood, leather and rubber footwear, toys, and consumer electronics. It is probably not incidental that some newly developed industries in Hainan that were financed with foreign capital fall into these categories. Apparently,

Hainan's comparative advantage at this stage lies in the same area as the NIEs at their initial stage: industries that require large amounts of labor but relatively little capital, technology, or land. This, of course, does not preclude a shift at some point to resource-based or skill-intensive industries, as Taiwan and Korea did. Industries based on a cheap and abundant supply of natural gas are an example. Whether and when to shift still depend largely on market conditions at home and abroad.

IV. AGRICULTURAL DEVELOPMENT

In most developing economies, agricultural output accounts for the largest share of GNP, and the overwhelming majority of the people depends on farming for its livelihood. This is true of Hainan, as was the case with Taiwan and Korea before their economic take-offs. Economic development is a process of transforming a predominantly agricultural economy into one that produces mainly industrial and service outputs. Take the case of Taiwan, for example. The share of agricultural output in net domestic product dropped from 36 percent in 1952 to 18 percent in 1970, while industry's share rose sharply from 18 to 35 percent over the same period.[1] However, the dramatic shift from agriculture to industry in Taiwan's output structure occurred not as the result of a declining or stagnant agricultural production, but over a period of growth in which both agricultural and industrial production advanced rapidly and simultaneously, although at different rates. In the period 1952–1970, agricultural output had been growing at an average rate of 5 percent per year, a high growth rate for agriculture.[2] This is most significant to Taiwan's success, because, for any developing country, agricultural growth has a major role to play both in the initial and subsequent stages of development.

At the initial stage, any developing country must face the problem of getting started with whatever resources it has. Agriculture being the largest sector, it is natural that resources for development come largely from it. These resources take the form of an agricultural surplus to finance the development of the nonagricultural sector, exports of agricultural products, and release of rural labor for nonagricultural employment. For example, from 1952 to 1961, exports of agricultural products and processed agricultural products contributed 82 percent of Taiwan's total exports.[3]

As the economy industrializes, the importance of agricultural growth by no means diminishes, because there is a complementary relationship between agricultural and industrial growth and a stagnant agricultural sector would constrain industrial development.

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[1]Council for Economic Planning and Development, 1989, p. 41. For changes in the employment structure, see ibid., p. 15.

[2]Ibid., p. 67. In general, 4–5 percent growth for the agricultural sector is considered extraordinarily rapid. See John Mellor in Lewis and Kallab (1986), pp. 67–89. This refers to a long-term growth rate. In periods of recovery, it could go much higher. For example, agricultural production in Taiwan grew at 10.3 percent per year during 1947–1953. See Thorbecke in Galenson (1979), p. 145. The rather high growth rate of 8.3 percent for Hainan in 1980–1988 may be of the same nature. Hainan Statistical Bureau, 1989, pp. 63–67.

[3]Council for Economic Planning and Development, 1989, p. 211.

In a labor-surplus economy like Taiwan or Hainan, the industries that develop first are likely to be those processing agricultural products. Also, growth of nonagricultural employment increases the demand for food. If food supply is short, increased industrial employment will cause the price of food to rise. The result is that, if wages remain the same, the real income of the workers, and hence the incentive to work, will decrease, or that, if wages increase, employment will decrease. Therefore, the increase in industrial employment must be accompanied by accelerated growth in food supplies. At the same time, agricultural growth creates an increasing demand for goods and services from the nonagricultural sector, thus providing an expanding domestic market to supplement the export market.

In sum, it is necessary to build agricultural growth into the overall development strategy, not only because of the close relationship between agricultural and industrial growth, but also because the material welfare of a very large segment of the population will not improve unless there is significant growth in the agricultural sector. The crucial question is how to increase agricultural output.

Broadly, there are two ways to increase output: by increasing land, labor, or capital or by increasing productivity. The two approaches are not alternatives, but the situation requires policy focus and resource allocation decisions. To some extent, the initial conditions may limit the range of available options and at the same time may offer some opportunities. For example, in the first 15 years after 1952, total crop area in Taiwan increased steadily, albeit at a low rate, but it has declined since 1967.[4] This means that Taiwan relied on increasing the crop area as one source of agricultural growth in the 1950s, but that this was no longer feasible after the mid-1960s. Another example is the replacement of the communes with the household responsibility system on the mainland in the early 1980s. The result was a sharp increase in output with hardly any increase in farm investment and, in fact, a reduction in total cultivated area. This was possible because, at that stage, the farmers' incentive to work was the critical bottleneck, and institutional reforms removed the bottleneck.

The point to be made here is that it would be useful for Hainan to carefully consider its existing conditions with respect to factor supply and factor use. A cursory examination of the data on land use suggests that cultivated land constituted only 43 percent of total arable land in 1988.[5] The data in Table 4 on farm mechanization and the use of farm machines are also noteworthy.

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[4]Ibid., p. 64.

[5]Hainan Statistical Bureau, 1989, pp. 43, 131.

Table 4

Farm Machine Use

	1980	1988
Capacity of farm machines (million kW)	0.7	1.3
Areas using machines for:		
Cultivating (1,000 mow)[a]	703	298
Sowing (1,000 mow)	6	1
Harvesting (1,000 mow)	8	—
Husking (1,000 mow)	1,013	555
Irrigating (1,000 mow)	210	190

SOURCE: Hainan Statistical Bureau, 1989, pp. 134–135.
[a]1 mow = 0.1647 acre.

The capacity of farm machines increased sharply from 1980 to 1988. In contrast, the utilization of these machines dropped markedly over the same period. This suggests that there may well be some potential in increasing output by bringing more land under cultivation and by raising the capacity utilization of agricultural capital. One must, of course, first sort out the causes for the current underutilization of land and capital.

In the long run, however, productivity increase is the key. The so-called green revolution that has successfully taken place in Taiwan is based on new technology and rapid growth in fertilizer use, adequate supply of water, new strains, increased commercialization of agriculture, and a complex set of institutions engaged in research and extension services by large numbers of highly trained people. Such technological change is of paramount importance because, unlike in industry, agricultural production quickly runs into diminishing returns. When that happens, production costs rise. Farmers would lose the incentive to produce if prices do not increase. Increasing food prices may not be feasible in an open economy or may be socially unacceptable in a closed economy. To keep the farmers motivated, their profits from farming must be maintained not by raising prices but by reducing costs through technological changes. As a result of technological changes, the per-hectare yields of major crops in Taiwan increased markedly. A comparison of the yields in Hainan and Taiwan in 1988, shown in Table 5, suggests that there is substantial potential for productivity increase in Hainan.

Taiwan's experience with technological change is a case of successful integration of private enterprise and public policy. At the beginning, the government introduced land reform consisting of a rent reduction program, the sale of public land to the farmers, and limiting land ownership of current landlords. Apart from increasing sharply the income of the farmers, the land reform resulted in a substantial net capital outflow from agriculture to

Table 5

Comparison of Agricultural Yields in Hainan and Taiwan, 1988 (kg per hectare)

	Hainan	Taiwan	Ratio: T/H
Rice	2,745	3,916	1.4
Potatoes	7,575	16,612	2.2
Soy beans	750	1,901	2.5
Peanuts	1,065	1,826	1.7
Sugar cane	33,975	95,511	2.8
Tea	886	10,065	1.1
Bananas	7,319	22,909	3.1
Pineapple	5,159	36,676	7.1
Citrus fruit	1,415	13,389	9.5

SOURCE: Hainan Statistical Bureau, 1989, pp. 155, 164; *Taiwan Statistical Data Book 1989*, pp. 69–72.

nonagriculture amounting to about 22 percent of the total value of agricultural production in 1950–1955.[6] At the same time, the government invested substantially in the infrastructure in support of agriculture, such as transportation, power, communications, input supply systems, farm credit, and marketing institutions. The most significant contribution was the Joint Commission on Rural Reconstruction, which was involved in planning and implementing R&D and extension work. The resource transfer generated by U.S. foreign aid also played a key role, providing about 59 percent of net investment in agriculture during 1951–1965.[7]

The Taiwan government, however, did not participate in agricultural production. The farming was left entirely to the farmers, who operated in an open market system. With the technical support from the government, the farmers were able to increase the yields of traditional crops and, more importantly, diversify into new products, such as mushrooms, asparagus, and fruits, and into new areas, such as livestock and fisheries production. The diversification is just another aspect of the development process in which the entrepreneurs continuously exploit the comparative advantages of agricultural production for the domestic market when demand for fruits and dairy products increases as income rises, or for the export market when cost-price relations prove profitable.

It will take an in-depth study to identify Hainan's comparative advantages. One can think of vegetables, because of Hainan's favorable climate and its proximity to urban centers; labor-intensive crops, such as tomatoes and mushrooms; and subtropical products. Whatever

[6]Thorbecke, 1979, p. 176.
[7]Thorbecke, 1979, p. 183.

products are chosen, the lesson again is to let the entrepreneurs do the job of seeking out the products as the Taiwanese farmers did. For the government, the task is to provide the infrastructure and the technical assistance.

V. FINANCING ECONOMIC DEVELOPMENT

As we noted above, high investment rates have been found in all the NIEs. In Korea, the investment rate was only 8 percent in 1950 but rapidly increased to 12 percent in 1955.[1] In Hainan, the investment rate is already quite high, as the estimates of gross fixed investment rate in Table 6 show. Sustaining a high rate of growth will undoubtedly require an enormous investment. The problem is how to finance it.

Table 6

Estimates of Gross Fixed Investment Rate

	1987	1988
Fixed investment (million yuan)	1,145	1,499
GDP (million yuan)	5,588	7,248
Ratio: Investment/GDP	20	21

SOURCE: Hainan Statistical Bureau, 1988, p. 60; Editorial Committee of the Hainan SEZ Yearbook, 1989, pp. 446, 449. The totals are in current prices.

In real terms, investment can only be financed by savings. There are various sources of savings. For the purpose of policy design, it will be useful to distinguish between savings from domestic or foreign sources, among the various savers that provide the domestic savings (government, enterprises, and households), and among different types of foreign savings (foreign investment and foreign borrowing). This is because policies to promote and mobilize savings from different sources are different.

A useful device to gauge the relative size of domestic and foreign savings is the simple framework that relates gross domestic product (O) to other aggregate components in the national income accounts: private and government consumption (C), gross domestic investment (I), imports (M), and exports (X). The formula

$$O + M = C + I + X$$

shows that the sum of gross domestic product and imports represents the total resources available. The sum of consumption, investment, and exports represents how the total resources are being used. Rearranging, one can derive the following:

$$(O - C) + (M - X) = I$$

[1] World Bank, 1980, p. 120.

The first item measures domestic savings, and the second measures foreign savings or foreign capital inflow. Together, they "finance" gross domestic investment. This, of course, is an accounting identity, but is useful to show the relative significance of domestic and foreign savings. Table 7 presents the shares of domestic and foreign savings in total savings in 1950, 1960, and 1970. The importance of foreign capital inflow in all three cases in the 1950s is clear. It contributed 67, 33, and 166 percent of total savings in the three economies, respectively, in 1955. It reached a peak in Korea and Taiwan in 1960. Since then, it has declined sharply. The record suggests that in the early phase of development, foreign savings indeed played a significant role. Once the economy began to take off, domestic savings became predominant. Thus, by 1970, foreign savings accounted for only slightly over one-third of Korea's total savings, and in Taiwan, it almost dropped to zero. If the experience is to be repeated in Hainan, the policy focus would be on how to attract foreign capital in the initial stage, but mobilizing domestic savings is important at all times, although more so in subsequent stages.

For lack of data, it is not possible to provide estimates of domestic and foreign savings for Hainan. It should be useful to have even rough approximations. For Hainan, the imports and exports in the accounting framework should include imports and exports from the mainland at "market prices." Hence, foreign capital inflow actually includes two

Table 7

Domestic and Foreign Savings, Korea, Taiwan, and Hong Kong, 1955–1970 (%)

	Domestic Savings	Foreign Savings	Total
Korea			
1955	32.6	67.4	100.0
1960	14.3	85.7	100.0
1965	51.0	49.0	100.0
1970	63.6	36.4	100.0
Taiwan			
1955	67.5	32.5	100.0
1960	62.7	37.3	100.0
1965	85.8	14.2	100.0
1970	99.8	0.2	100.0
Hong Kong			
1955	–66.6	–66.6	100.0
1960	3.7	96.3	100.0
1965	58.2	41.8	100.0
1970	99.2	0.8	100.0

SOURCE: World Bank, 1980, pp. 100–120, 190.

components: resource inflows from foreign countries and resource inflows from the mainland. The latter should comprise investment from other provinces, loans and grants from the central government, and implicit subsidies from various ministries. Even a rough order of magnitude would be useful as a check for the possible size of block grants discussed in a separate study.[2]

For Hainan, the options in choosing sources of savings may be limited in the sense that, given the enormous demand for capital investment, resources from any source, domestic or foreign, would be welcome, provided the cost is not prohibitively high. In the long run, however, domestic savings will be the primary source, as was the case with all three NIEs. For that reason, it may be useful to take a closer look at Taiwan, which relied more on domestic savings than the other two.

Table 8 presents the shares of the major sources of domestic savings in Taiwan in 1952, 1960, and 1970. These data show that in the initial year, 1952, the major savers were depreciation, government, and the private sector, each accounting for about a third of the total. Over time, there has been a decline in the share of government savings, possibly because of the displacement of government savings by foreign aid during this period. The most significant change was the rising trend in the share of private savings. By 1970, it rose to about 50 percent of total domestic savings.

Several factors contributed to the sharp rise of private savings in Taiwan. One distinctive feature of Taiwan's industrialization is the development of small business enterprises. The growth of output occurred mainly through the expansion in the number of firms rather than in the size of existing firms, as in Korea. Personal savings may offer more opportunity for individuals to start their own businesses. Another strong incentive to save

Table 8

Major Sources of Domestic Savings in Taiwan, 1952–1970

	1952	1960	1970
Government	32.4	19.4	12.0
Public enterprise	2.4	10.4	10.0
Private sector	30.6	30.8	49.7
Depreciation	34.6	39.4	28.3
Total	100.0	100.0	100.0

SOURCE: Council for Economic Planning and Development, 1989, p. 54.

[2]Henry (1991).

was that the real interest rate was relatively high, and there was hardly any consumer credit to encourage consumer spending. A third incentive for families to save was their intent to support their children to acquire an education if they could not enter the public colleges or if they wanted to study abroad. Given these rather strong incentives, and the steadily rising real per-capita income, it is not surprising that private savings reached 13 percent of GNP in 1970 and subsequently rose further to 17 percent of GNP in 1988. In this process, the government played an important role. In addition to the banking system, which was entirely state-owned, the post offices also provided the services of savings institutions, with a widespread network reaching far into the rural areas. A more important factor was that the government, on the one hand, had not artificially depressed the nominal interest rate, as many developing countries did, and, on the other hand, succeeded in holding back inflation, so that the real interest rate remained high enough to attract private savings.

It should be stressed that even in Taiwan foreign capital was quite important in the first decade of development. Apart from its contribution to narrowing the savings gap that often exists at the early stage, foreign capital inflow also helps to mitigate foreign-exchange shortages. More important, it brings in foreign expertise urgently needed at this stage. Thus, it seems quite sensible for Hainan to be spending such great effort nowadays in attracting foreign investment. The issue of how best to approach the problem will not be discussed here, since it is covered in the study comparing SEZs[3] and in the discussion of free trade zones in the study on restructuring Hainan's trade and finance.[4] Suffice it to say that attracting foreign investment is consistent with the outward-oriented strategy. Foreign investment and export-promotion are mutually supporting. Growth of exports increases Hainan's debt-servicing capacity and capability to remit profits abroad. Foreign capital, in turn, brings with it the technology, management skills, and marketing expertise vital for Hainan to move into the international market.

[3]Roll (1991).
[4]Wolf (1991).

VI. ROLE OF THE GOVERNMENT

In view of the current emphasis on integrating planning and the market in China, the issue of the proper role of the state in the future economy is of some importance. Should it be a minimalist state, whose function is limited to preserving law and order, as in Hong Kong? Or should it retain most of its current functions, as in Korea? The criterion is, of course, which model suits Hainan's conditions better, and here one must first understand what role the state played in the NIEs and its positive or negative contribution to their economic growth.

There is considerable evidence that economic growth is negatively correlated with the size of the public sector.[1] Not surprisingly, compared to other developing countries, the size of the government and the scope of government controls in the NIEs are smaller and more limited. Hainan's policy of moving toward a small government is consistent with the NIE experience, particularly in view of the fact that Hainan's initial condition was one of state control of a wide range of economic activities and that the government bureaucracy was disproportionately large. The implication is that the market system has to be developed to take over some of the functions of coordination of economic activities and resource allocation, for, unless this happens, the government cannot remain small.

The fundamental issue is a question not of size but of where the government can and should play a more active role and what it should leave to the private sector. For a developing socialist economy like Hainan, it means a reorientation of effort from the role of a controller to that of a catalyst. The experience of the NIEs suggests that, as a catalyst, the government could contribute significantly to economic growth in four areas:

(1) The first is the creation of a modern infrastructure, such as roads, power, water supply, and irrigation networks. For example, providing up-to-date communication facilities was a precondition for establishing Hong Kong as a financial center, and it assisted in the rapid expansion of exports in Korea and Taiwan.

(2) For Hainan, the development of a social infrastructure for the market system to function effectively is particularly important. This means the establishment of law and order; an effective legal system that defines and enforces rules concerning property rights, contracts, anti-trust, bankruptcy, etc.; and a social-security system. Apart from building an institutional framework for the market-oriented system, the government has the major task

[1]Balassa, 1988, p. S288.

of enforcing the operational rules to make sure that the system works. For example, the market system to be developed is one of competitive markets. In the real world, purely competitive markets rarely exist. But it is important for the government to see to it that monopolistic and monopsonistic elements are reduced to a minimum. For Hainan, this may be particularly significant, because such elements seem quite prevalent among state-owned enterprises. The transition from a monopolistic economy to a competitive one generally requires drastic measures and determination on the part of the government.

(3) Another area that requires government involvement is short-term economic stabilization. Macroeconomic stability is a prerequisite for rapid development. If runaway inflation were to develop, capital would flee abroad, wage demands would push the prices to go higher, contracts would have to be renegotiated frequently, and the overvalued exchange rate would result in loss of export competitiveness. It is therefore imperative that the government tightly control public finance and vigorously pursue a noninflationary monetary policy.

(4) Finally, there is the need for government involvement in preparing for long-term structural adjustment. Korea's largely unsuccessful experience with selecting the heavy industries as a strategic sector to be developed indicates that structural adjustment, in the sense of picking what industries to expand for exports, should best be left to the entrepreneur. But this is not to say the government has no role to play. On the contrary, it is vital for the government to provide education, training, and research and development. The changing export structure of the NIEs clearly shows that comparative advantage is a dynamic concept. The capability to adapt to changes in demand and cost conditions depends on the capacity to innovate, which in turn hinges on the degree to which an economy can build up its infrastructure of qualified scientific personnel and intensify its R&D activity. Korea has moved the fastest in increasing its expenditures on R&D relative to GNP. Taiwan invested heavily both in research and in construction of high-technology industrial parks. Hong Kong relied more on technology transfer. Whichever route a developing country may choose to take, active government participation is necessary.

It seems fair to say that, in the transition as well as in the post-reform period, the role of the government should be strengthened rather than weakened. Only its policy focus needs to be reoriented from directly allocating resources and participating in all kinds of economic activities to perfecting the soft and hard infrastructure of the system and filling in the gaps left open by the market system.

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